# Journey to the Moon 1969

## An Event to be Remembered until the end of Time

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**COLOR PICTURES FROM THE MOON**
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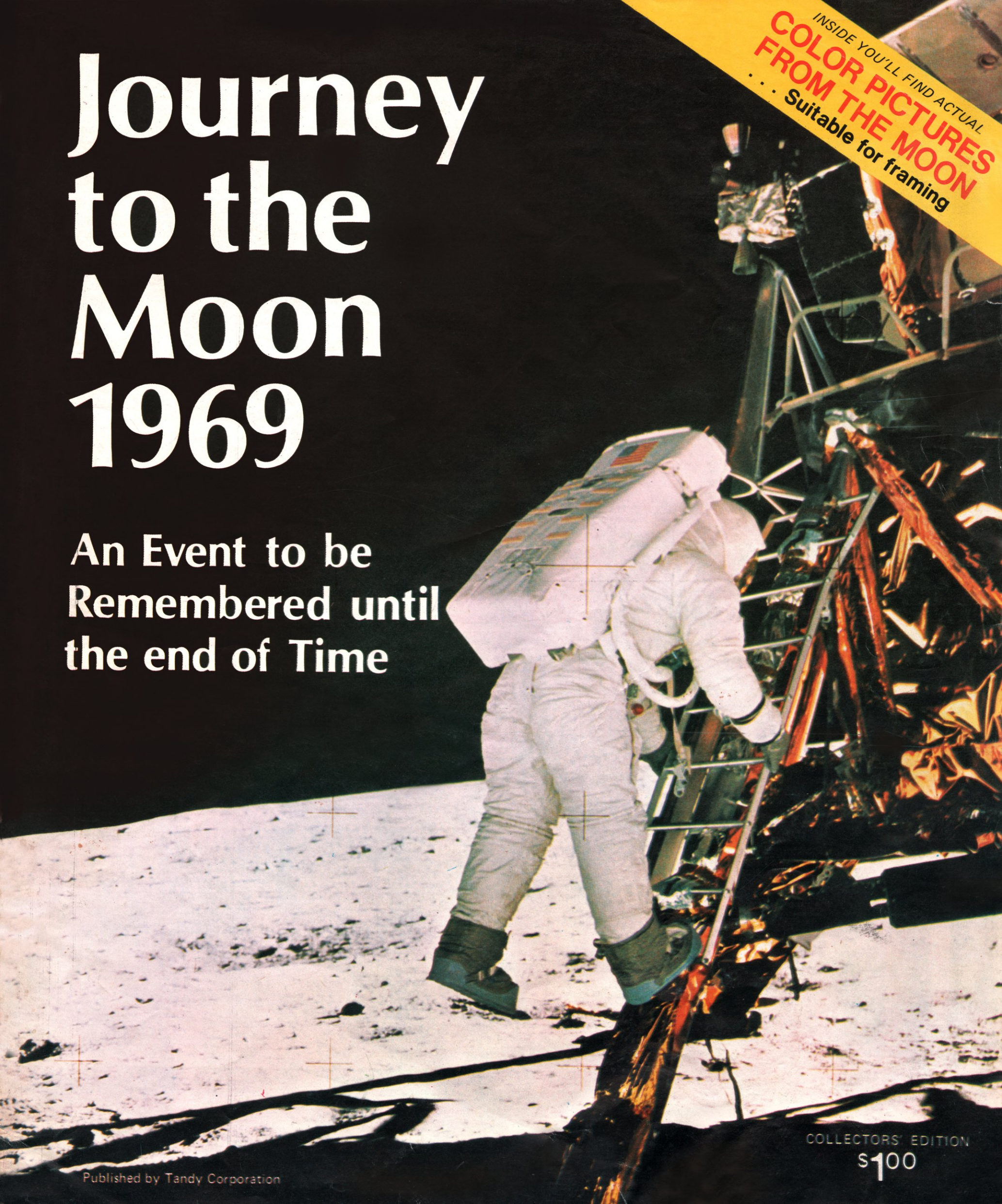

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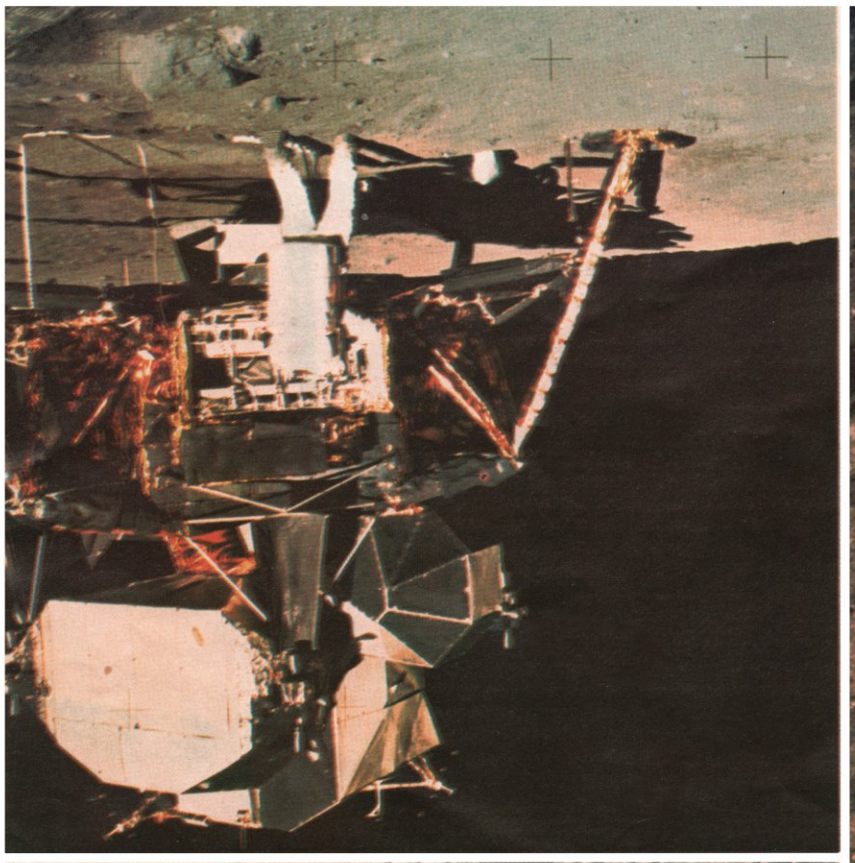
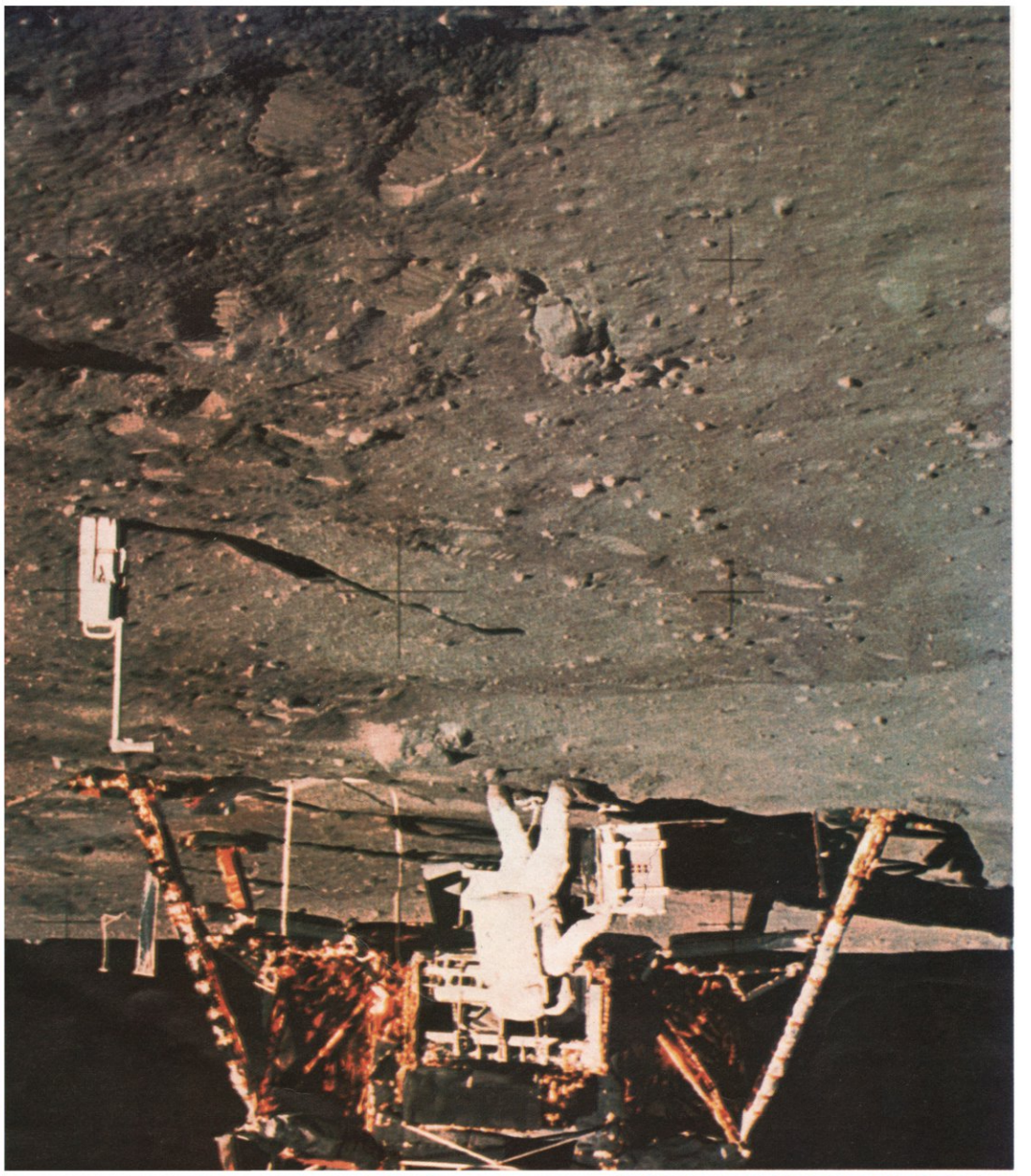
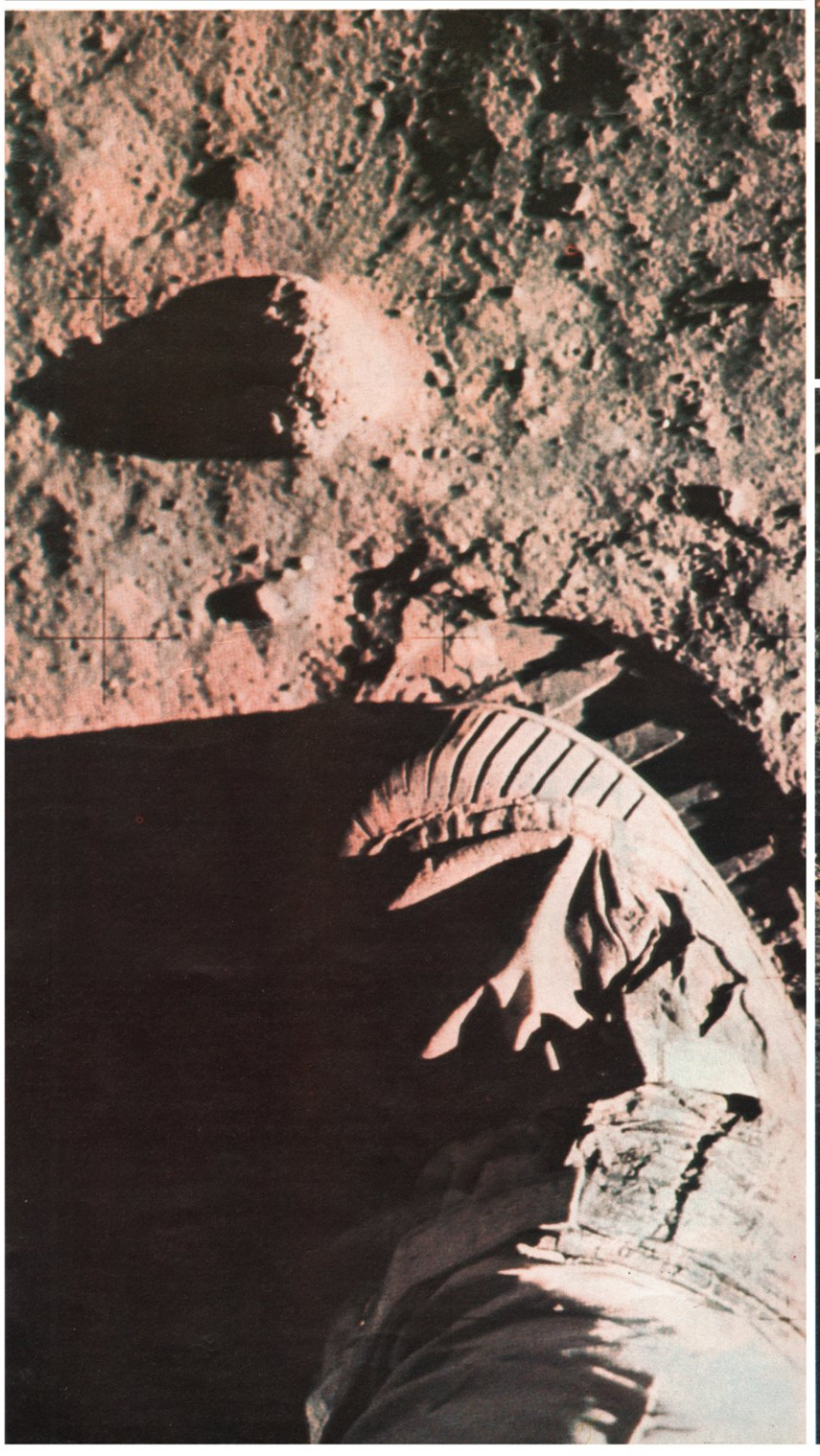






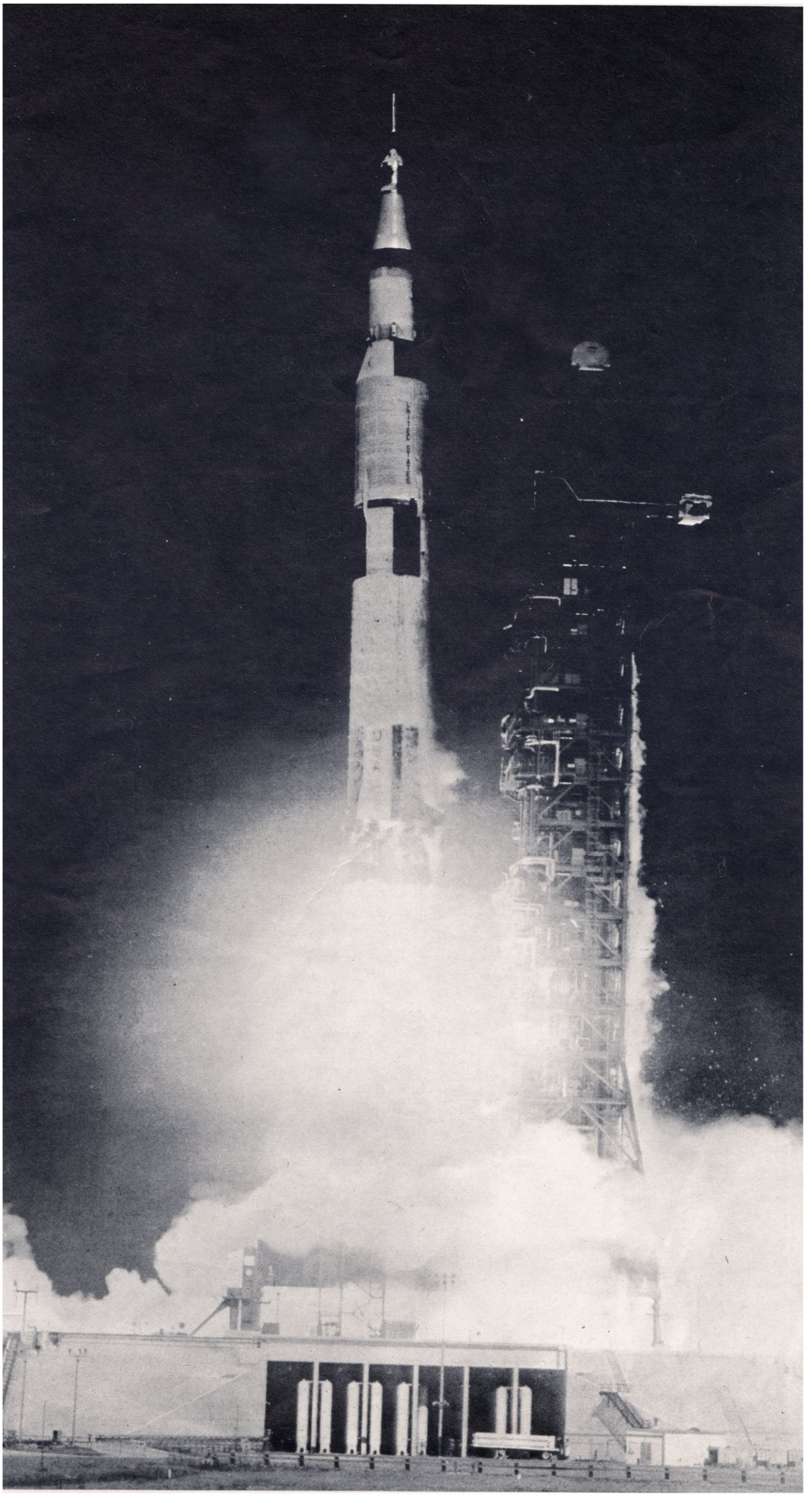
*"Astronaut Aldrin Inspects the Eagle's Foot Pads"*

# the journey begins...

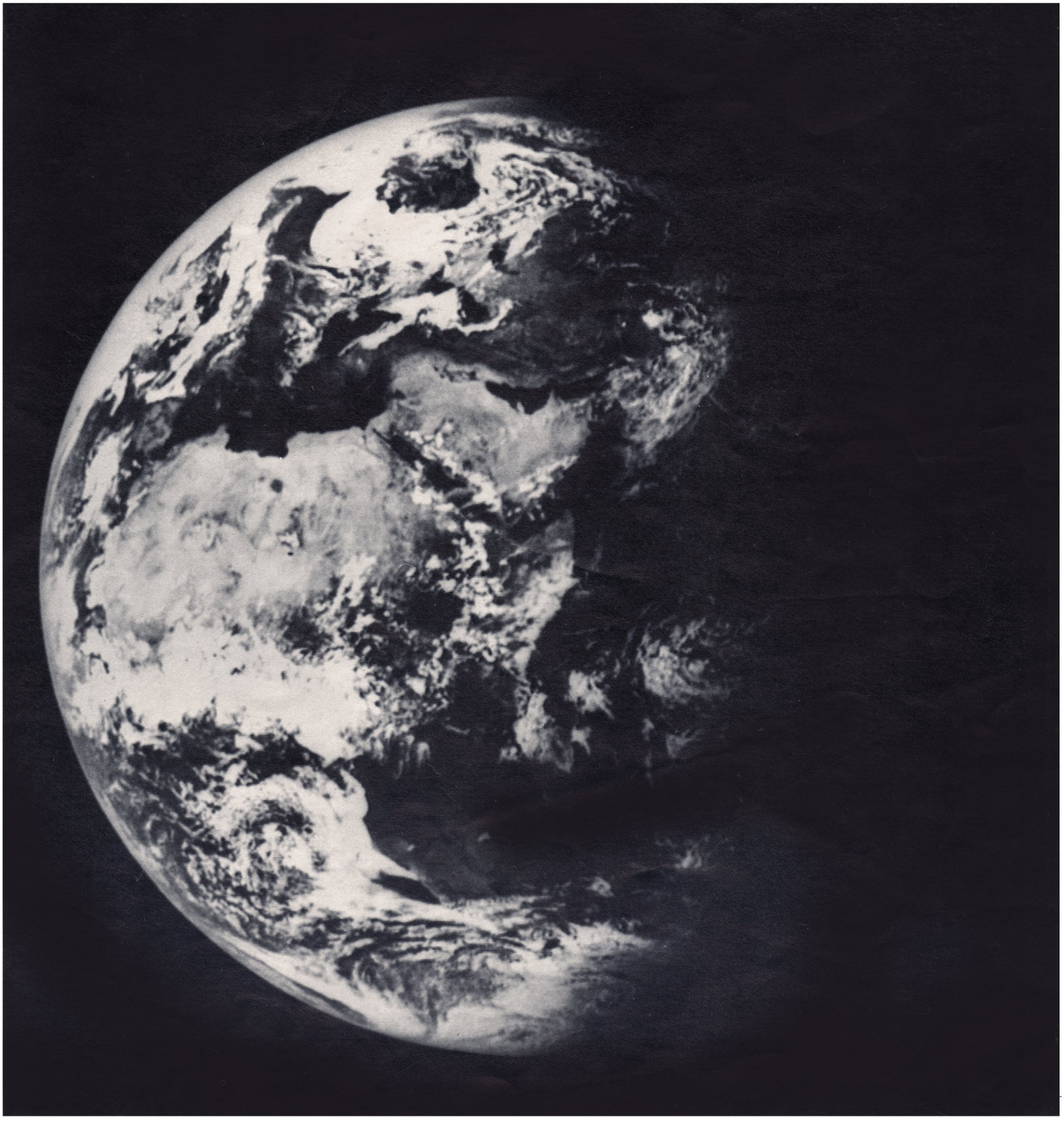
"Lift off. We have a lift off", were the words heard 'round the world on radio and television. The time was 9:32 a.m. Eastern Daylight Time, Wednesday, July 16. Seven words spoken from the Launch Control at Cape Kennedy that will ring forever in the annals of history of all mankind, marking the beginning of a journey that began with man's dream of conquering the vastness of space and ended in reality!

Rising from the flame like the legendary Phoenix, an emblem of immortality, the 363-foot Saturn 5 and its daring crew; Neil Armstrong, a former Navy pilot, Lieutenant Colonel Michael Collins and Colonel Edwin "Buzz" Aldrin, Jr., both of the Air Force, were in the first stage of a 250,810 mile journey.

At 9:35 a.m., reaching a speed of 6,198 m.p.h. the Saturn 5's engines were consuming liquid oxygen and kerosene at the rate of 2,230 gallons per second! At 11:57 p.m. all three astronauts were asleep aboard the Apollo 11, 77,992 miles from the earth, traveling at a speed of 4,787 m.p.h.



*KENNEDY SPACE CENTER, Fla. —The Apollo/Saturn V space vehicle carrying Apollo 11 astronauts Neil A. Armstrong, Michael Collins and Edwin E. Aldrin, Jr., lifted off at 9:32 a.m. EDT July 16, 1969, on the first manned lunar landing mission. The 363-foot-high vehicle generated a thrust of seven and one-half million pounds during liftoff from the Kennedy Space Center's Launch Complex 39A.*



*This dramatic photograph was taken by the astronauts from Apollo 11, about half-way between the earth and the moon. At top left of photo is Europe and top center is Asia.*

# halfway to the moon...

It's the second day of their journey, Thursday July 17, and the astronauts are halfway to the moon. The time is 10:33 a.m. Two hours later they are on a course set to bring them within 69 miles of the moon's surface! At 10:53 p.m., the sleeping astronauts are circling 147,802 miles above the earth at a speed of 2,817 miles per hour!

No longer earthlings, on Friday, July 18, the Apollo 11 crew sleeps late (an extra 69 minutes), allowed by Houston before awakening them. A one-hour, 36-minute color telecast of the flight begins at 4:44 p.m., as the camera follows Armstrong and Aldrin as they perform the tasks which will prepare the lunar module for the next lap of their never-before attempted journey! Before midnight that Friday, the Apollo 11 enters the "lunar sphere of influence". Three intrepid men, destined to become legends in their lifetime, are travelling at a speed of 2,037 m.p.h., soaring 214,402 miles from earth. Their speed will pick up now that the gravitational pull of the moon is greater than that of the earth.

The day begins for the crew at 8:32 a.m. on Saturday, July 19. Their speed is now 2,787 m.p.h., and they are within 14,359 miles of the moon's surface! Armstrong's life-long dream is fast becoming a reality, as he reports, "The view of the moon that we've been having recently is really spectacular. It fills about three-quarters of the hatch window . . . it's a view worth the price of the trip." The time was 10:47 a.m., and at 1:13 p.m., the Apollo 11 is out of contact with the earth, and now only 355 miles above the moon's surface, traveling at a speed of 5,225 m.p.h., as it disappears behind the moon!

Thirty-four minutes later at 1:47 p.m., the Apollo 11 zooms back into view, and the tracking station at Madrid reports telemetry signals.

"We're getting this view of the landing approach . . . the pictures and maps brought back by Apollos 8 and 10 give us a very good preview of what to look at here. It looks very much like the pictures, but like the difference between watching a real football game and watching it on TV - no substitute for actually being here," comes the report from Armstrong a few minutes past 1:47 p.m. A 34-minute telecast begins at 3:56 p.m. clearly showing the lunar surface and tracing the path that the lunar module is to follow on its way to the moon's surface. A running commentary by the astronauts gives the world a preview of the finale so anxiously awaited throughout the world, as they point out craters and hills on the surface. Preparations for the next day's descent continue through midnight, and at 1:03 a.m., the three astronauts finally call it a day and go to bed.

*MOON AS SEEN BY APOLLO 11 CREW--This is the surface of the moon at the landing spot of Apollo 11 lunar module. Silhouetted against the*

*surface is the Lunar Module.*

# "the eagle has landed"...

The day of man's first landing on the moon begins at 7:07 a.m. on that never-to-be-forgotten day, Sunday, July 20, 1969! Just past 9:00 o'clock the Apollo 11 again disappears behind the moon, losing radio contact with Houston. Buzz Aldrin enters the lunar module, code name Eagle, during this period. Radio contact with Apollo 11 is re-established at 9:52 a.m., and a short time later Neil Armstrong joins Colonel Aldrin in the Eagle, leaving Mike Collins in the command module, code name Columbia. At 12:57 p.m., just two minutes before Apollo 11 again disappears behind the moon, Houston radios, "We're going for undocking."

Sixty seconds before swinging from behind the moon, Eagle and Columbia unlock!

"The Eagle has wings," Neil Armstrong radios, at 1:50 p.m., confirming the undocking and the irrevocable commitment of man's boldest venture has been made! At 3:08 p.m., hidden by the moon's surface, the Eagle's 9,800-pound thrust descent-stage engine fires for 29.8 seconds, dropping it into an orbit with a low point of 9.8 miles above the moon's surface! Forty minutes later, Eagle re-established radio contact with Houston. At 4:05 p.m., Eagle's altitude is 50,000 feet, 260 miles from the landing site, as the engine begins firing to slow down, and drop to the lunar surface. Just 10 minutes later, at 4:15 p.m., the Eagle is flying at 750 feet! Its windows are up, its two-man crew looking into the blackness of space above.

At 350 feet, traveling at 2.7 m.p.h., Neil Armstrong spots a football-field-sized crater littered with boulders from 10 to 15 feet in diameter where Eagle's computer-programmed landing approach is aiming the craft. He quickly switches to semi-automatic controls and instructs the computer to fly Eagle over the danger area. One second past 4:17 p.m. the descent engine is shut off.

Eagle settles to the moon in the Sea of Tranquility! "Houston, Tranquility Base here," Neil Armstrong reports, "The Eagle has landed!" At 4:29 p.m. Eastern Daylight Time. "Tranquility," the capsule communicator says, "be advised that there are a lot of smiling faces in this room and all over the world."

"There are two of them up here," Eagle replies. "And don't forget one in the command module," Mike Collins reminds from lunar orbit!

# "one small step for man ...one giant leap for mankind"

At 7:13 p.m., Apollo Control relays a message to the world from Buzz Aldrin: "I'd like to take this opportunity to ask every person listening in, whoever and wherever they may be, to pause for a moment and contemplate the event of the past few hours, and to give thanks in his or her own way." Shortly thereafter, preparations began for their moon walk, scheduled now to take place 4 hours and 22 minutes early.

At 10:48 p.m. Eastern Daylight Time, Neil Armstrong begins positioning himself to move out backward through Eagle's hatch. "Relax a little bit," Buzz Aldrin suggests. Two minutes later, at 10:51 p.m., "Okay, Houston, I'm on the porch." Neil Armstrong pauses for a moment on the platform under Eagle's hatch before placing his lunar "overshoe" on the first step. Three minutes later, he pulls a lanyard that opens the storage area holding a black-and-white television camera.

Sixty seconds later, a giant screen in Apollo Control flickers and a picture appears upside down, until engineers right it. Eagle's ladder is in shadow, but beyond, harsh sunlight floods the surface in brilliant contrast. A foot appears. "Okay Neil, we can see you coming down the ladder now," Houston reports.

"I'm at the foot of the ladder. The LM foot pads are only depressed in the surface about one or two inches, although the surface appears to be very, very fine grained. As you get close to it, it's almost like powder."

"That's one small step for man, one giant leap for mankind." With these words, Neil Armstrong steps onto the lunar surface, making one of the most anxiously awaited and unreservedly applauded "first steps" ever made by man, as he fulfills one of man's most ancient dreams!

The flight surgeon monitoring the astronauts' heart beats and respiration reports they are doing well.

Man is on the moon! Not only is he on the moon, but like most travelers, he immediately begins to "take pictures" and gather-up the most prized and possibly the most valuable "souvenirs" ever to be brought back by a tourist!

At 11:12 p.m., Buzz Aldrin makes his exit from the Eagle. A minute later he says, "Now I want to back up and partially close the hatch, making sure not to lock it on my way out!"

"A good thought," Neil Armstrong answers.

Buzz Aldrin steps onto the moon. The time is 11:14 p.m. The astronauts begin an inspection of the Eagle's descent stage and find that one of the landing probes is broken and bent upward.

"Here men from the planet earth first set foot upon the moon, July 1969 A.D. We came in peace for all mankind," Neil Armstrong reads, as he unveils the plaque attached to one of the Eagle's landing legs. The time is 11:24 p.m., the plaque with the signatures of the Apollo 11 crewmen and President Nixon, will remain on the lunar surface.

The television camera is moved about 30 feet away from the Eagle, by Neil Armstrong, as he begins to pan the lunar landscape. A long sheet of aluminum foil designed to collect particles of the solar wind that bombards the moon, is unfurled. Scientists hope that the panel will collect one-billionth of an ounce of particles from the sun for them to study!

The American Flag is set up on the moon! A spring device keeps it "waving" on the airless, windless moon. Mike Collins, aboard the Columbia, is about the only person who cannot witness these events as they take place. He has no TV coverage!

Experimenting, Buzz Aldrin tries a series of kangaroo hops but finds the attempt not too successful. "You do have to be rather careful to keep track of where your center of mass is. Sometimes it takes about two or three paces to make sure you've got your feet underneath," Aldrin says.

"Because of what you have done, the heavens have become part of man's world," President Nixon, watching the moon walk at the White House with Frank Borman who orbited the moon on Apollo 8, talks directly to the astronauts.

A new day is just beginning. It is now 12:05 a.m., Monday, July 21, Eastern Daylight Time, as Neil Armstrong continues to gather about 50 pounds of lunar soil and rocks, which he stores in one of two aluminum rock boxes for return to earth. He reports the laser reflector set up at 12:36 a.m. Scientists hope to use the device to measure the distance between the earth and moon to within six inches of accuracy and to study the theory that earth's continents are drifting apart.

For the first time man's foot falls on the moon are recorded shortly after 12:44 a.m., just after the astronauts unfold the two solar panels which power the passive-seismometer experiment. These instruments are sensitive enough to record a meteoroid the size of a pea landing a half mile away. Moonquakes will also be recorded, if they occur.

Time is running short, and there is no time for photographs, as Neil Armstrong begins collecting more lunar samples, scooping as deep as three inches beneath the moon's surface this time.

"I hope you're watching how hard I have to hit this into the ground," Buzz Aldrin says, as he hammers the tube into the surface to a depth of eight or nine inches. This is the first of two core samples, the seismometer records his pounding, indicating the moon is a good transmitter of shock waves.

Next, Colonel Aldrin takes down the solar-wind experiment, placing it with the two core samples into the rock box with the material Neil Armstrong is collecting.

As their time on the moon's surface runs short, the whole world watches as Neil Armstrong claims one last souvenir. He picks up a moon stone to return to earth!

At 12:57 a.m., Colonel Aldrin re-enters the Eagle. At 1:03 a.m. Neil Armstrong's heartbeat peaks at 160, as he sends the first box of rocks up to Colonel Aldrin by a strap and pulley. The second box goes up at 1:07 a.m., and the precious cargo is aboard the Eagle!

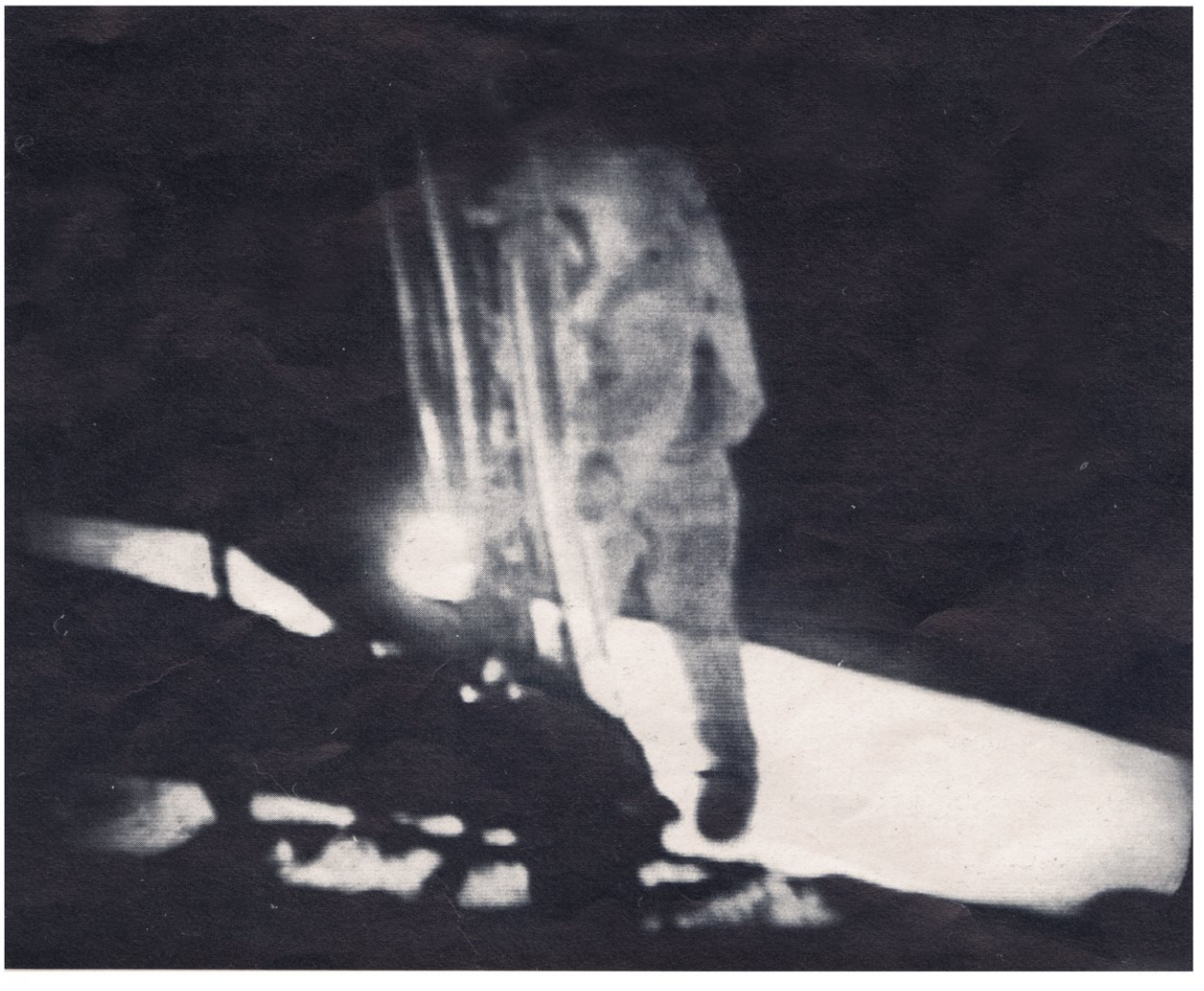
Neil Armstrong boards the Eagle at 1:09 a.m., and reports that he has collected about "20 pounds of carefully selected, if not documented, samples" in the second box. "Okay, the hatch is closed and latched," Buzz Aldrin reports at 1:11 a.m., "And we're up by it, secure."

At 3:57 a.m., on the morning of Monday, July 21, the astronauts turn off the TV camera, and 4:25 a.m., Houston bids the Eagle goodnight, leaving the world to wonder if, even after all their strenuous activity and the excitement of the past few hours, the astronauts will be able to sleep!

"Not since Adam has any human known such solitude as Mike Collins is experiencing during the 47 minutes of each lunar revolution when he is behind the moon with no one to talk to except his tape recorded aboard Columbia," Apollo Control comments at 9:42 a.m.

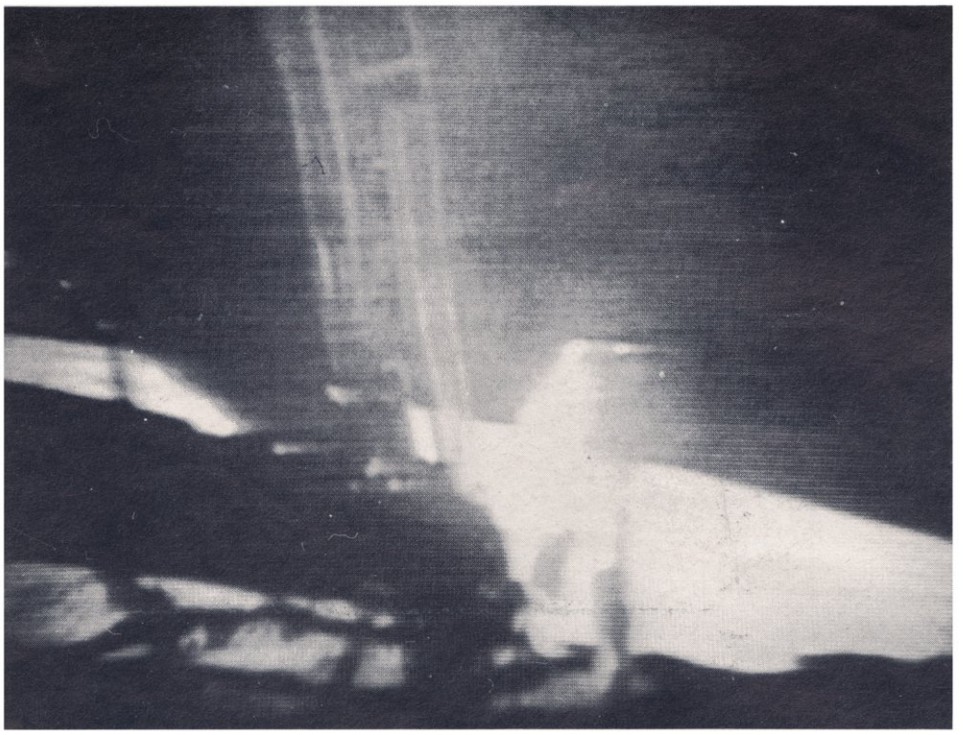
Awakened from a fitful sleep, shortly after 11:00 o'clock, the Eagle's crew started preparations for re-joining the Columbia. At 1:44 Houston reports, "Everything looks good." It's 10 minutes to lift off. Eagle's descent stage is to serve as launching platform for the ascent stage.

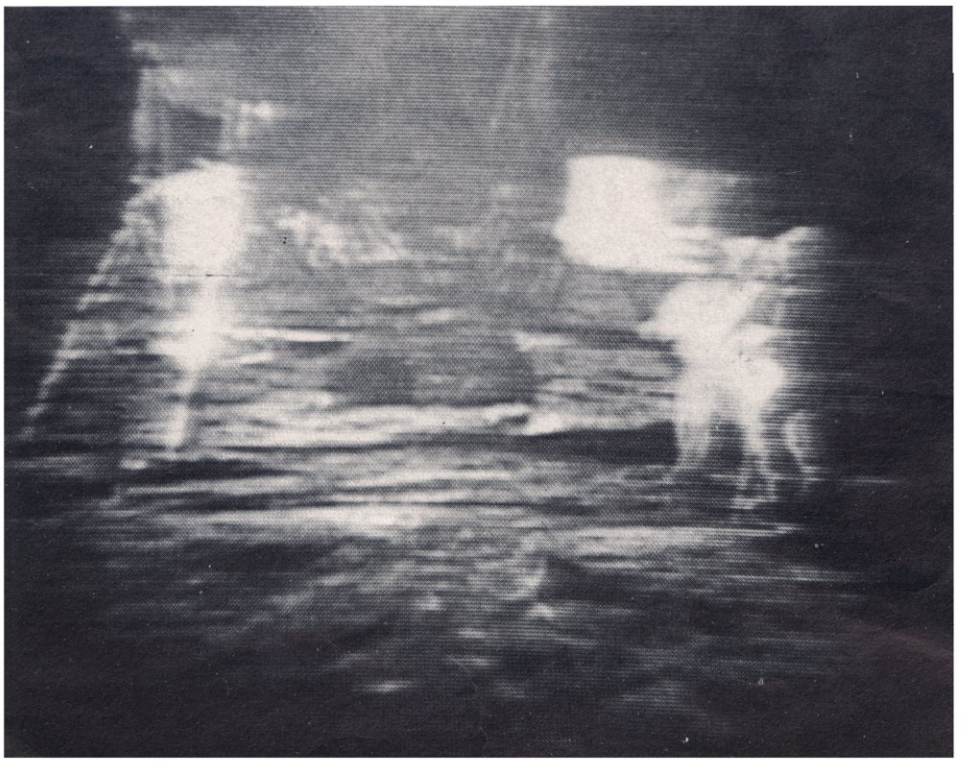
*(Top) Photograph of the earth taken from the surface of the moon.*



*(At left) Neil A. Armstrong as he takes the first step on the moon.*

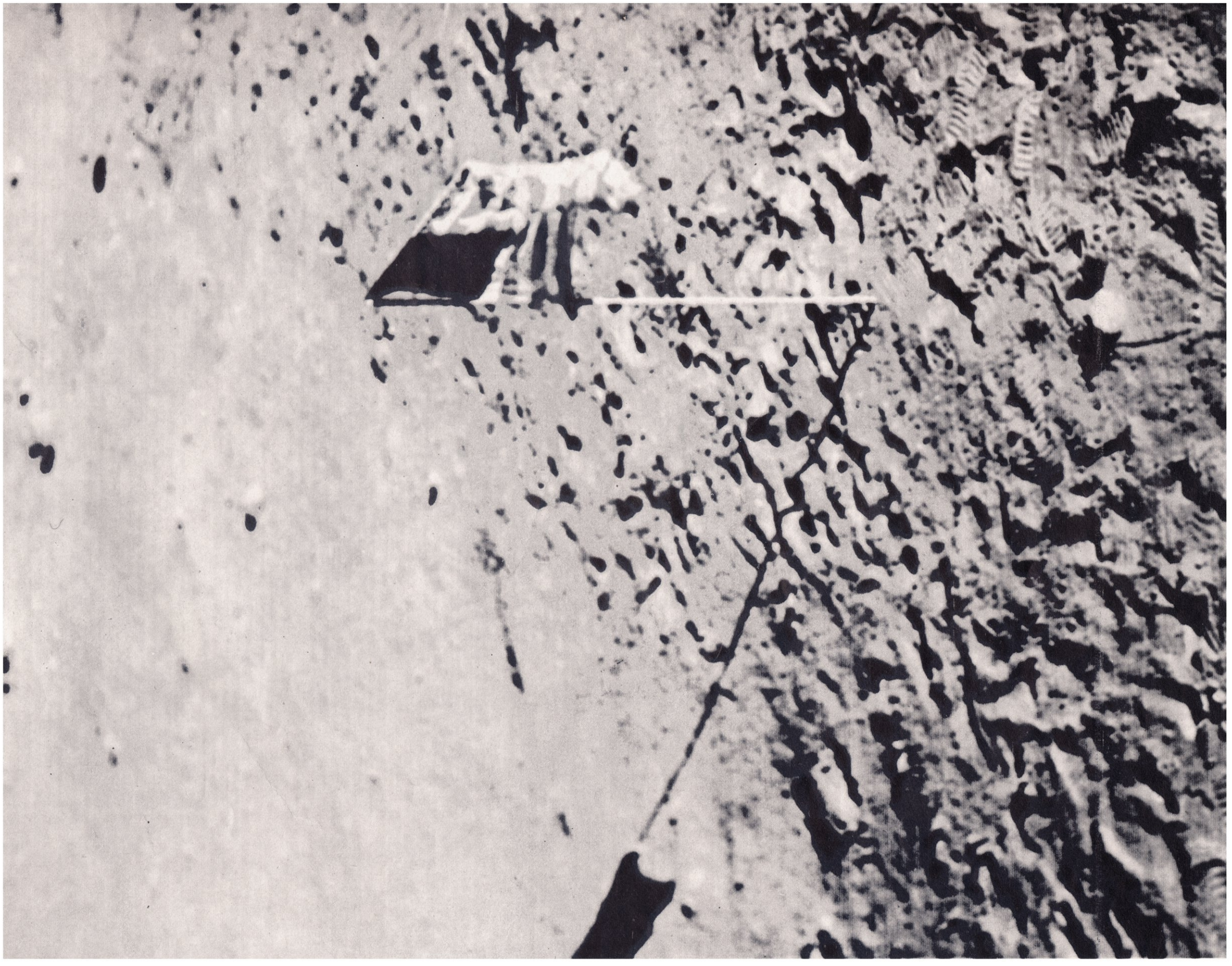
*Due to the advancement of modern science—millions of people all over the world were able to watch and to hear what was said—as man took his first step on the moon—240,000 miles from earth!*





*Man's first step on the moon was watched by millions of television viewers throughout the world, as Neil Armstrong stepped down onto the moon's surface, Sunday, July 20, 1969, just 4 minutes before 11:00 p.m. EDT, to be joined by Buzz Aldrin only 18 minutes later. At 11:41 p.m. they set up the American flag with a spring device that keeps it "waving" on the airless, windless moon!*

*RESTING AFTER MOON WALK —This photograph of Astronaut Neil Armstrong, Apollo 11 commander, was taken inside the lunar module while the LM rested on the lunar surface. Astronauts Armstrong and Edwin E. Aldrin, lunar module pilot, had already completed their extravehicular activity when this picture was made.*



# blast off !

Blast off! Eagle's 3,500-pound-thrust engine fires the top half of the lunar module straight up, at 1:54 p.m., leaving the descent stage as a permanent monument to man's first landing on the moon!

Eagle's engine shuts off as the craft reaches 3,775 m.p.h. and sails into lunar orbit, at 2:01 p.m. "Eagle is back in orbit and left Tranquility Base, and leaving behind a replica from our Apollo 11 launch," is heard at 2:05 p.m. "Roger, we copy, the whole world is proud of you," Houston tells them. "We needed a lot of help," comes the reply from Eagle.

Excited scientists speculate they have detected their first moonquake or meteoroid slamming into the lunar surface, when at 4:20 p.m., the seismometers left on the moon record a distant shock.

At 5:35 p.m., following a series of rendezvous maneuvers, Columbia docks with Eagle! "Okay, we're all yours," Buzz Aldrin tells Mike Collins as the two craft lock together, after a separation of 27 hours and 48 minutes. Neil Armstrong and Buzz Aldrin are back in the command module with Mike Collins at 7:13 p.m.

A small maneuvering rocket separates Apollo 11 from the un-manned lunar module at 8:02 p.m., at a relative speed of 1.4 m.p.h. "There she goes," Columbia reports, "She was a good one." Long after the astronauts return to earth Eagle's ascent stage will remain to orbit the moon!

*OLD GLORY FLIES ON THE MOON —The flag of the United States dominates this photograph taken from inside the LM. In far background is black and white lunar surface television camera which the astronauts left on the moon. Footprints stand out clearly in rust-colored surface of moon. Shadow of LM is black. TV camera is white.*

# returning to earth...

Tuesday, July 22, at 12:55 a.m., hidden by the moon, Apollo 11 begins its 31st revolution, Columbia is now 22 miles ahead of Eagle and one mile below. At 1:11 p.m. the astronauts are awake after 10 hours of rest.

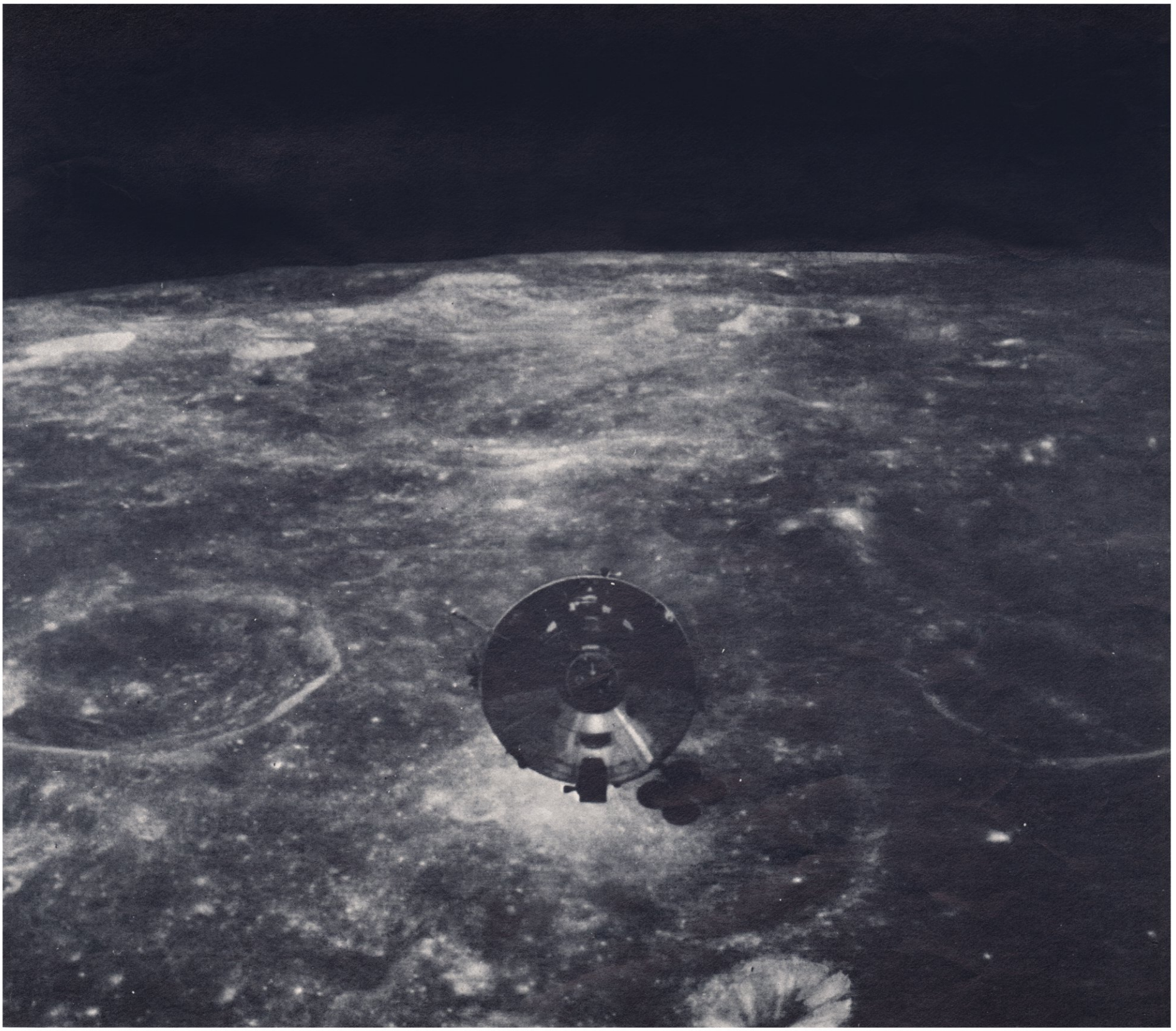
Less than 30 minutes later, at 1:39 p.m. zooming 38,870 miles from the moon, Apollo 11 reaches the point where earth's gravitational pull exceeds the moon's. The craft gains speed.

At 4:02 p.m., Apollo 11's maneuvering rockets fire 10.5 seconds to slow the craft 3.3 m.p.h. and aim it more accurately towards earth. By 10:42 p.m. Apollo 11 is 176,042 miles from earth. Their speed is 2,982 m.p.h.

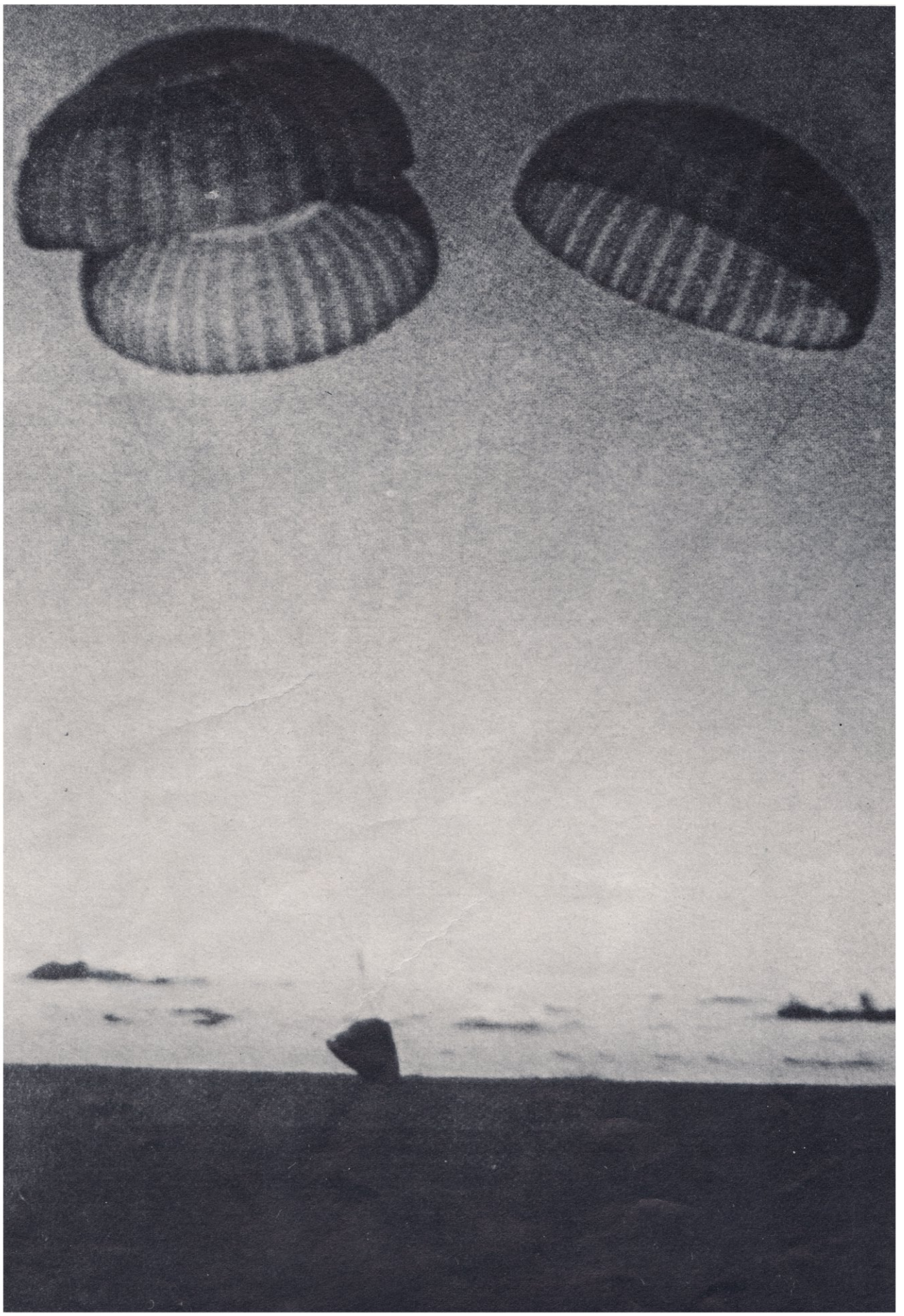
Wednesday, July 23, at 12:26 p.m. the Apollo 11 crew is just starting what is scheduled to be a relatively easy day, following a 10-hour rest period. Re-entry is scheduled for tomorrow!

Another telecast from space begins at 7:04 p.m., and the astronauts' narrative this time becomes philosophical, as they endeavor to verbalize the meaning of man's first visit to another planet. "A verse from the Psalms comes to mind to me: 'When I consider the heavens, the work of Thy fingers, the moon, and the stars which Thou has ordained, what is man that Thou art mindful of him.'" Buzz Aldrin said during the telecast.

Bad weather is expected at the splash-down target, Houston reports to Apollo 11, at 11:16 p.m. The craft will maneuver so it enters the atmosphere at a shallower angle, in order to give it more lift and drop it about 247 miles down range.



# splashdown!



Re-entry day! Thursday, July 24, at 7:42 a.m., Apollo 11 is still 42,499 miles out. The three-man crew is still sleeping. Their speed is 6,951 m.p.h., by 11:22 a.m. the distance is 13,182 miles out. Speed is now 11,810 m.p.h. and increasing rapidly.

Less than 60 minutes later, at 12:20 p.m., the command module separates from the service module, and two minutes later, Houston reports: "You're looking mighty fine here. You're cleared for landing."

"Guidance reports Apollo 11 is right down the middle of the corridor," comes the anxiously awaited report from Apollo Control. It's just 28 minutes past 12:00 o'clock noon!

At 400,000 feet Apollo 11 strikes earth's upper atmosphere. The time is 12:35 p.m., and 18 seconds later, the high heat of re-entry blacks out all radio contact with the crew. Speed 24,707 m.p.h., 1,736 miles from splashdown in the Pacific Ocean 912 miles southwest of Hawaii. Earth's atmosphere is rapidly decreasing Apollo 11's speed.

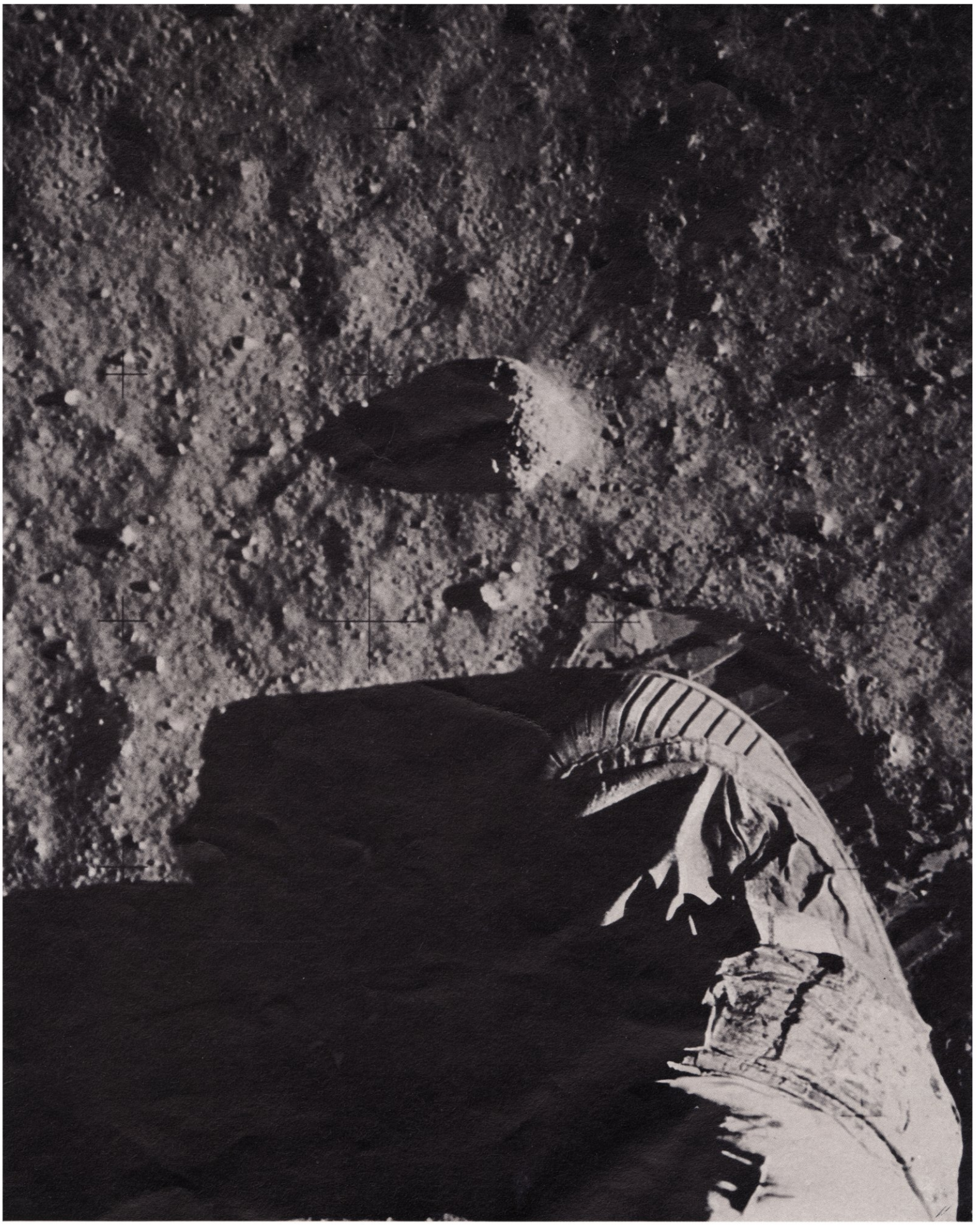
At 12:38 p.m. one of the recovery aircraft spots the Apollo 11's heat shield as it streaks through the early morning sky (6:38 a.m. in splashdown area.)

Radio blackout ends at 12:39 p.m., and at 12:44 p.m., at 23,300 feet, two parachutes are released to slow the craft. Sixty seconds later all 3 parachutes are open. Apollo 11 is on course, at 1,500 feet, suspended over the ocean by its brilliantly colored parachutes.

"SPLASHDOWN!" a rescue helicopter reports. "Apollo has splashdown". It's 12:50 p.m. The space craft comes down nose first, 13 miles from the recovery ship U.S.S. Hornet.

Man's first trip to the moon is a success! Their return to earth is safely accomplished. The American Eagle has flown to the moon, and claimed for itself a place in the history of all humankind, leaving as a reminder a plaque which reads: "Here men from the planet earth first set foot upon the moon. July 1969 A.D. We came in peace for all mankind."

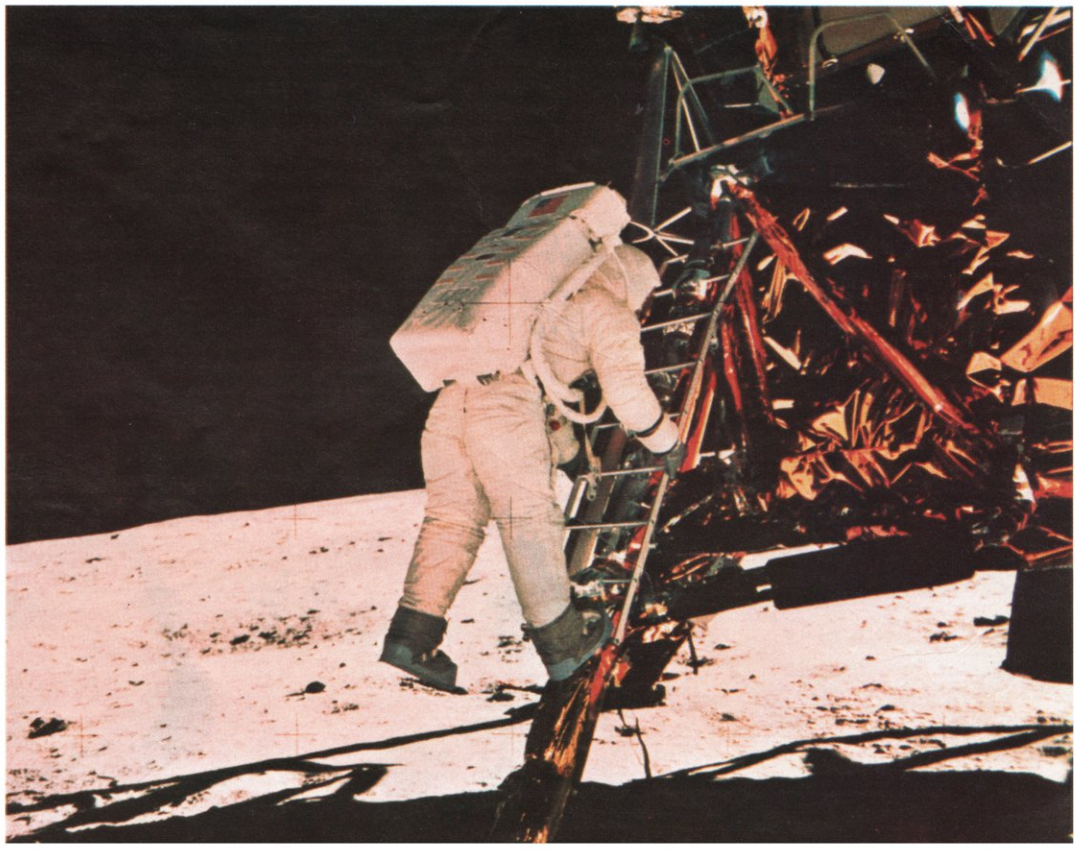
"That's one small step for man, one giant leap for mankind."

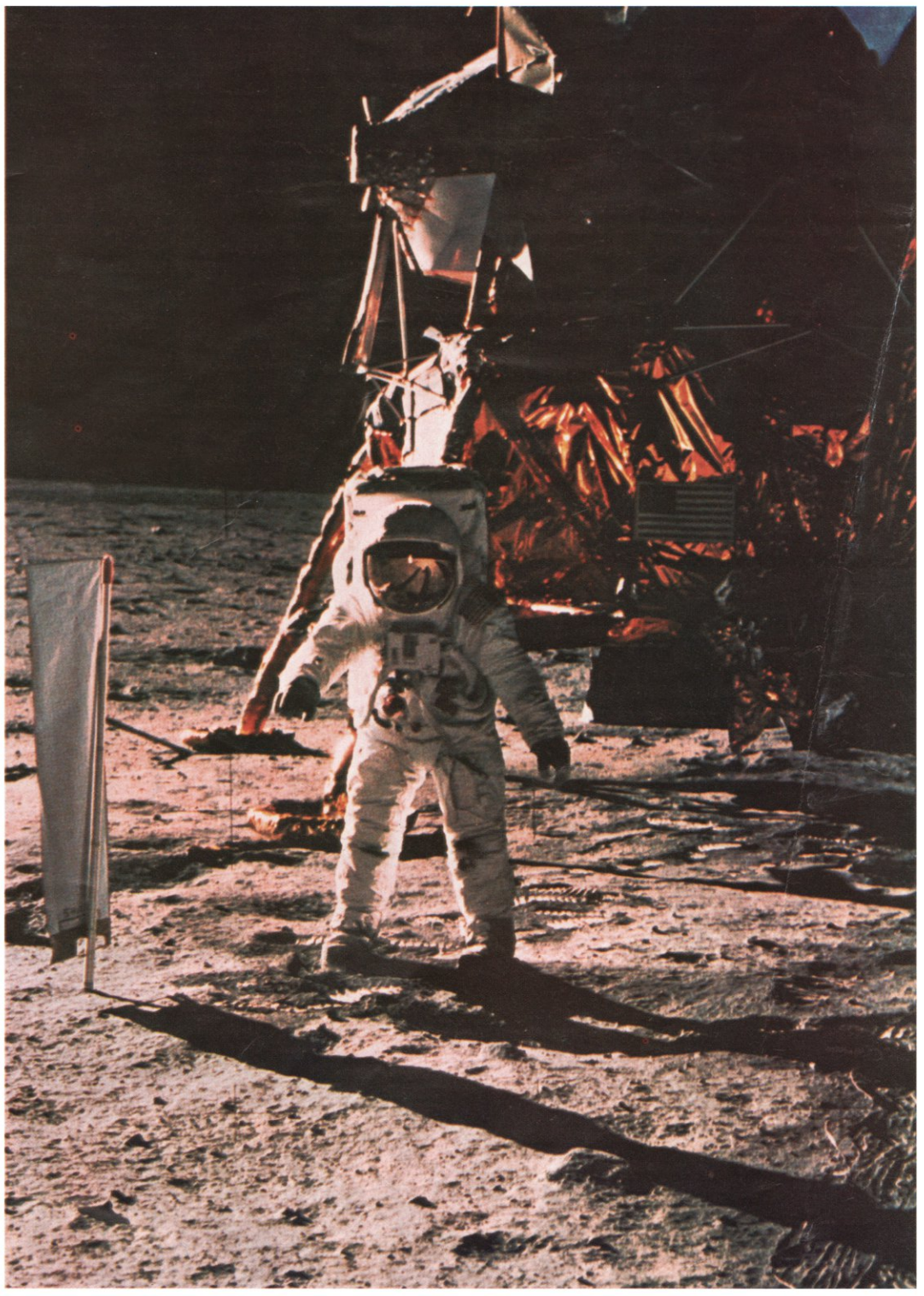


*"That's one small step for man. . .one giant leap for mankind"*

*'Old Glory' . . . First Flag on the Moon*

THE PLANET EARTH
THE MOON
A. D.
FOR ALL MANKIND





*"First Men to Visit the Moon"*

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